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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,732

12/15/2005

Felipe Martinez

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The Dow Chemical Company
P.O. BOX 1967
Midland, MI 48641

EXAMINER

YAGER, JAMES C

ART UNIT

PAPER NUMBER

1782

MAIL DATE

DELIVERY MODE

05/24/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,732	Applicant(s) MARTINEZ, FELIPE	
	Examiner JAMES YAGER	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9, 11-14, 17, 18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9, 11-14, 17, 18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 April 2010 has been entered.

Response to Amendment

2. The amendment filed 23 April 2010 has been entered. Claims 1-6, 8, 9, 11-14, 17, 18 and 20-22 are currently pending in the application. The rejections of record from the office action dated 25 January 2010 not repeated herein have been withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There does not appear to be support to recite that the polyolefin has no crosslinking. The cited phraseology clearly signifies a “negative” or “exclusionary” limitation for which the applicants have no support in the original disclosure. Negative limitations in a claim which do not appear in the specification as filed introduce new concepts and violate the description requirement of 35 USC 112, first paragraph, *Ex Parte Grasselli, Suresh, and Miller*, 231 USPQ 393, 394 (Bd. Pat. App. and Inter. 1983); 783 F. 2d 453.

The insertion of the above phraseology as described above positively excludes crosslinking, however, there is no support in the present specification for such exclusions. While the present specification is silent with respect to the use of crosslinking, is noted that as stated in MPEP 2173.05(i), the “mere absence of a positive recitation is not the basis for an exclusion.”

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-6, 8, 9, 11-14, 17, 18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVaudreuil et al. (US 6,114,025) in view of Heider (US 4,360,556).

Regarding claims 1-6, 8, 9, 11-14, 17, 18 and 20-22, DeVaudreuil discloses a foam sheet comprising 1 to about 90 weight percent of LLDPE and 10 to 99 weight percent of LDPE (i.e. a film consisting of one or more foamed polyolefin sheet; clearly overlapping wherein the sheet is made from a blend comprising 10-90 percent by weight LLDPE and 90-10 percent LDPE; clearly overlapping wherein the blend is made from 50 percent to 90 percent by weight of LLDPE; clearly overlapping wherein the blend contains about 70 percent LLDPE) (C2/L60-65), wherein the LLDPE has a

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specific gravity of about 910 to about 940 kg/m.³ and an MI of less than about 10 dg/min (i.e. clearly overlapping wherein the LLDPE has a density in the range of 0.900 to 0.930 and an MI in the range of 2 and 6) (C3/L60-65, C4/L10-13), wherein the LDPE has a specific gravity of from about 915 to about 925 kg/m.³ and an MFI of from about 0.2 to about 3.8 dg/min (i.e. wherein the LDPE has a density in the range of 0.917 g/cc to 0.923 g/cc and an MI in the range of from 0.2 to 6 g/10min) (C4/L50-55), wherein the thickness is less than about 13mm (i.e. clearly overlapping wherein the sheet is 3 to 8mils thick; clearly overlapping wherein the sheet is about 3 mils thick; clearly overlapping wherein the sheet is less than 3 mils thick) (C7/L4-8).

DeVaudreuil does not disclose that the foamed polyolefin sheet has a density reduction of from 10 to 50 percent compared to a non foamed sheet of the same composition or that the sheet has a density reduction of at least 20 percent compared to a non foamed sheet of the same composition.

Heider discloses a foamed low density polyethylene sheet having a density reduction of about 10 to 20 percent over unfoamed sheet material (C1/L65-C2/L2, C2/L27-32). Heider further discloses that for this density reduction, the properties, such as impact resistance, coefficient of friction, ductility, tear resistance, environmental stress cracking resistance, elastic modulus, yield stress, yield strain, ultimate strength and ultimate elongation, are not proportionately reduced (C2/L28-42).

DeVaudreuil and Heider are analogous art because they both teach about foamed sheets comprising LDPE. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the amount of density

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reduction of Heider in the foam sheet of DeVaudreuil in order to provide a foam sheet that maintains good impact resistance, coefficient of friction, ductility, tear resistance, environmental stress cracking resistance, elastic modulus, yield stress, yield strain, ultimate strength and ultimate elongation.

Given that the foamed layer of modified DeVaudreuil is made of the same materials in the same proportions of the same thickness and density as the instantly claimed invention, it is clear that the foamed layer will possess identical properties i.e. having an MD tear strength of at least 150 gr/mil; the MD tear strength is greater than 350 gr/mil; the oxygen vapor transmission is 2.18 gr/mil/100 in.sq*24 hr; the oxygen vapor transmission is 270 cc.mil/100 in.sq*24 hr; having an MD tear strength of at least 50gr/mil.

Given that modified DeVaudreuil does not disclose that the foamed layer is crosslinked, it is the examiner's position that the polyolefin has no crosslinking.

Although modified DeVaudreuil does not disclose that the film is a blown film or that the foam layer has been made using a land length to die gap ratio of less than 25, or has been made using a blow up ratio of from about 2.2 to about 4.0 as claimed, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further,

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“although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed blown film or the foamed layer has been made using a land length to die gap ratio of less than 25, or has been made using a blow up ratio of from about 2.2 to about 4.0 and given that modified DeVaudreuil meets the requirements of the claimed sheet, DeVaudreuil clearly meets the requirements of present claims 1, 12, 13, 17, 21 and 22.

While modified DeVaudreuil fails to exemplify the presently claimed thickness of the sheet nor can the claimed thickness be “clearly envisaged” from DeVaudreuil as required to meet the standard of anticipation (cf. MPEP 2131.03), nevertheless, in light of the overlap between the claimed thickness and the thickness disclosed by DeVaudreuil, absent a showing of criticality for the presently claimed thickness, it is urged that it would have been within the bounds of routine experimentation, as well as the skill level of one of ordinary skill in the art, to use 3 to 8mils thick; 3 mils thick; or less than 3 mils thick which is both disclosed by DeVaudreuil and encompassed within the scope of the present claims and thereby arrive at the claimed invention.

As set forth in MPEP 2144.05, in the case where the claimed range “overlap or lie inside ranges disclosed by the prior art”, a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

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8. Claims 12 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over DeVaudreuil et al. (US 6,114,025) in view of Heider (US 4,360,556), as applied to claims 1 and 17 above, in further view of Hughes et al. (US 3,963,403).

Regarding claims 12 and 21, modified DeVaudreuil discloses all of the claim limitations as set forth above. Modified DeVaudreuil does not specifically disclose that the foam layer is made using a land length to die gap ratio of less than 25.

Hughes discloses a pipe made from foam plastic (C1/L13-15) that is made using a low land length to die gap ratio, optimally 2:1 (C2/L45-55). Hughes discloses that the low land length to die gap ratio prevents foaming upstream of the outlet and provides a stronger and leak resistant wall (C1/L48-51).

DeVaudreuil and Hughes are analogous art because they both teach about articles made of foamed plastic. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the land length to die gap ratio of 2 as disclosed by Hughes in the process of making the sheet of modified DeVaudreuil to provide a sheet that is stronger and leak resistant.

Response to Arguments

9. Applicant's arguments filed 23 April 2010 have been fully considered but they are not persuasive.

Applicant argues that there is support to recite “no crosslinking” because the claim as originally filed recited “substantially no crosslinking” and the word “substantially” was removed for clarity.

Applicant’s argument is unpersuasive because “no crosslinking” is clearly narrower than “substantially no crosslinking” and signifies a “negative” or “exclusionary” limitation for which the applicants have no support in the original disclosure.

Applicant argues that the thickness of DeVaudreuil is from 0.5 mm to 13 mm and therefore does not overlap the claimed range.

As set forth above, DeVaudreuil discloses that the thickness is less than about 13mm (i.e. clearly overlapping wherein the sheet is 3 to 8mils thick; clearly overlapping wherein the sheet is about 3 mils thick; clearly overlapping wherein the sheet is less than 3 mils thick) (C7/L4-8).

It is noted that “nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims.” In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960).

Applicant argues that the materials of DeVaudreuil will not have the tear strength recited in the present claims and would not be suitable for applications served by the blown film market.

However, it is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner’s position that the arguments provided by the applicant regarding whether the materials of DeVaudreuil will not have the tear strength recited in

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the present claims and would not be suitable for applications served by the blown film market must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

Applicant argues that Heider teaches films having a thickness of 0.014 to 0.018 inches and that Heider is non-analogous art.

However, note that while Heider does not disclose all the features of the present claimed invention, Heider is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely a foamed low density polyethylene sheet having a density reduction of about 10 to 20 percent over unfoamed sheet material (C1/L65-C2/L2, C2/L27-32). Heider further discloses that for this density reduction, the properties, such as impact resistance, coefficient of friction, ductility, tear resistance, environmental stress cracking resistance, elastic modulus, yield stress, yield strain, ultimate strength and ultimate elongation, are not proportionately reduced (C2/L28-42), and in combination with the primary reference, discloses the presently claimed invention.

Applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is “reasonably pertinent to the particular problem with which the inventor is concerned.” A reasonably

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pertinent reference is further described as one which “even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” Heider is, therefore, a reasonably pertinent reference, because it teaches a foamed ldpe sheet having a density reduction of about 10 to 20 percent over unfoamed sheet material (C1/L65-C2/L2, C2/L27-32). Heider further discloses that for this density reduction, the properties, such as impact resistance, coefficient of friction, ductility, tear resistance, environmental stress cracking resistance, elastic modulus, yield stress, yield strain, ultimate strength and ultimate elongation, are not proportionately reduced (C2/L28-42), which is a function especially pertinent to the invention at hand.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 5/18/10

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1782